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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/536,654	11/25/2005	Thomas Convent	1890-0240	9074
50255 7590 05/01/2007 MAGINOT, MOOR & BECK 111 MONUMENT CIRCLE, SUITE 3000 BANK ONE CENTER/TOWER INDIANAPOLIS, IN 46204				
			EXAMINER CONNOLLY, MARK A	
			ART UNIT 2115	PAPER NUMBER
			MAIL DATE 05/01/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Office Action Summary**

Application No.

10/536,654

Applicant(s)

CONVENT ET AL.

Examiner

Mark Connolly

Art Unit

2115

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 27 May 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 12-27 and 29-31 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) 12-27, 29 and 30 is/are rejected.
- 7) ☐ Claim(s) 20 and 31 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 May 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>9/26/05</u> .   | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

1. Claims 12-27 and 29-31 have been presented for examination.

#### ***Drawings***

2. Figures 2 and 3 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

#### ***Claim Objections***

3. Claim 21 is objected to because of the following informalities: The claim is dependent from canceled claim 11. It is believed that claim 21 was meant to depend from independent claim 12 and has been interpreted as such. Appropriate correction is required.
4. The numbering of claims is not in accordance with 37 CFR 1.126 which requires the original numbering of the claims to be preserved throughout the prosecution. When claims are canceled, the remaining claims must not be renumbered. When new claims are presented, they must be numbered consecutively beginning with the number next following the highest numbered claims previously presented (whether entered or not).

Misnumbered claims 29-31 should be renumbered as 28-30.

#### ***Claim Rejections - 35 USC § 103***

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5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 12-16, 18-19, 21-26 and 29-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicants Admitted Prior Art [AAPA] in view of Morimoto et al [Morimoto] US Pat No 6442704.

7. Referring to claim 12, the AAPA teaches the method of identifying a clock frequency of a system clock for the configuration of a peripheral device substantially comprising:

- a. applying the system clock to a host [fig. 1].
- b. applying the system clock to the peripheral device [fig. 1].
- c. configuring the peripheral device using the system clock [page 2 lines 1-5].

Although the AAPA teaches supplying a system clock to a host and peripheral device and wherein the peripheral device is configured using the system clock, it is not explicitly taught to include a secondary clock and determining the frequency of the system clock using the second clock based on a predetermined clock frequency of the second clock.

Morimoto teaches controlling operation of a device by means of determining a first clock frequency by using a second reference clock signal (interpreted as a secondary clock) and determining a ratio between the first and second clock signals and multiplying the ratio with the known reference clock frequency [col. 2 lines 51-55 and col. 4 lines 7-15]. It would have been obvious to first off use Morimoto's ring oscillator in the AAPA system because it would reduce the current consumption associated with the oscillator [col. 1 lines 19-22]. In addition, it would

have been further obvious to provide the secondary clock to both the host and peripheral device so that they may determine the frequency of the system clock because Morimoto teaches that oscillators can experience fluctuations due to external factors such as temperature and by providing the clock frequency determining means, the frequency accuracy would be improved [col. 2 lines 7-14].

8. Referring to claim 13, Morimoto teaches counting a number of edge changes of the system clock within a predetermined number of periods of the secondary clock [col. 2 line 56 - col. 3 line 5].

9. Referring to claim 14, the AAPA teaches setting an identical interface transmission rate for a first interface of the host and for a second interface of the peripheral device as a function of the clock frequency of the determined system clock [page 3 lines 5-8].

10. Referring to claim 15, the AAPA teaches setting the transmission rate defined be a predetermined standard [page 2 lines 19-25].

11. Referring to claim 16, the AAPA teaches varying the system clock during operation and signaling information representative of the change to the module through the second interface [page 2 lines 12-17].

12. Referring to claim 17, although not explicitly taught, clock generators are designed to operate within a predetermined tolerance. In other words, the generated clocks may only skew by a predetermined maximum amount. This ensures the accuracy in the generated clocks frequency. Therefore, it is obvious that the

13. Referring to claim 18, the AAPA teaches the data transmission rate between the interfaces is dependent on the clock frequency of the system clock [page 3 lines 3-8].

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14. Referring to claim 19, Morimoto teaches that factors such as temperature can affect the frequency of the system clock as stated above. The usual cause for fluctuations in temperature is based on the activity level of the device. As the utilization of the device increases, so does its temperature. Likewise, when the device utilization decreases or if the device sits idle, temperature decreases. Therefore, it is interpreted that the AAPA-Morimoto system constantly monitors (i.e. determines) the system clock frequency to account for fluctuations in the clock frequency as the temperature changes within the system. Since the clock is constantly monitored, it is obvious that the determining occurs after an initialization phase.

15. Referring to claim 21, the AAPA teaches employing a PLL circuit in the peripheral device to generate a constant clock frequency of the system clock [page 2 lines 3-10].

16. Referring to claim 22, this is rejected on the same basis as set forth hereinabove. In addition, the AAPA teaches the peripheral being a Bluetooth module configured for the system clock of a mobile radio device [page 1 lines 19-22].

17. Referring to claims 23-26 and 29-30, these are rejected on the same basis as set forth hereinabove.

18. Claims 17 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over AAPA and Morimoto as applied to claims 12-16, 18-19, 20-26 and 29-30 above, and further in view of Mar US Pat No 6294962.

19. Referring to claim 17, although the AAPA teaches the transmission rate between interfaces must be within a specific tolerance band, it is not explicitly taught to employ the tolerances of both the system and reference clock when determining the frequency of the system

clock in the peripheral device. Again the AAPA, states that the transmission rate between interfaces must fall within a specific tolerance band [page 2 lines 19-25]. Obviously the determined system clock will only fall into the band if both the clocks tolerances are at least equal to or stricter than the tolerance necessitated by the interface. As it is well known, clock generators are designed to generate clock signals within a predetermined tolerance. It is obvious that the tolerance of the reference clock generator would fall within the tolerance range for the interface to ensure proper operation of the interface. The system clock generator on the other hand, does not appear to fall within any tolerance due to the fact that the frequency is not regulated due to variations from temperature. Mar explicitly teaches that ring oscillators, even though their frequencies vary from temperature, are still designed to fall within a tolerance range at given temperatures [col. 4 lines 4-11]. In other words, even though the temperature may vary the clock frequency, the clock remains stable within the predetermined tolerance. Therefore, it is obvious that the system clock from the ring oscillator in the AAPA-Morimoto system would also fall within the tolerance range for the same reasons as stated for the reference clock.

***Allowable Subject Matter***

20. Claims 20 and 31 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

21. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark Connolly whose telephone number is (571) 272-3666. The examiner can normally be reached on M-F 8AM-5PM (except every first Friday).

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas C. Lee can be reached on (571) 272-3667. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Mark Connolly  
Examiner  
Art Unit 2115

mc  
April 26, 2007

A handwritten signature in black ink, appearing to be 'Mark Connolly', written in a cursive style.